Marlene H. Dortch, FCC Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: FCC 19-43; Allocation and Service Rules for the 1675-1680 MHz Band; Ex Parte Submission in WT Docket No. 19-116

Dear Secretary Dortch:

I, Francisco Sánchez, Deputy Emergency Management Coordinator for the Harris County Office of Homeland Security & Emergency Management, recognize the need to improve and expand wireless broadband speed and coverage in the U.S. It is one of the primary methods of providing real-time hydrological and metrological information to the public before, during, and after flood and weather events. It must also be recognized the need to safeguard current public safety uses of the 1675-1680 MHz spectrum band that specifically includes the Geostationary Orbiting Environmental Satellites (GOES) and the GOES -R satellites, which receive and transmit hydrologic data to ground receiving/downlink stations from thousands of hydrological and weather sensors throughout the United States and its territories. We should be concerned with the delivery of real-time stream gage data and other crucial hydrologic and meteorological information that provides flood risk communities throughout the United States and its territories with situational awareness and decision support during flood emergencies. Reliable, accurate, and timely data is imperative for flood warnings, emergency management, operational hydrologic models, water supply management, reservoir operations, and recreation safety.

I appreciate the Federal Communication Commission (FCC) does not want there to be harmful interface between new terrestrial fixed and mobile services and current and future federal and non-federal earth stations. Below are my responses to the specific comments and information requested applicable with reference to the paragraph number in the document.

1. How to ensure non-federal earth stations continue to have access to the data transmitted from the GOES-N and GOES-R satellites? (Paragraph 14)

The methods for non-federal earth stations would most likely be the same as for federal earth stations. Work with the technical experts to:

- determine how allocate or share the radio band to minimize interference,
- determine how to block any interference from the cellular broadband signals around all the earth stations (protection zones) because we understand the fixed or mobile cellular broadband signals will be much stronger than the raw data signal from the GOES satellites,
- require a "prove-it-will-work" period to make refinements and show it will work, and
- require a clear and fair process between the new wireless service companies and impacted federal and non-federal agencies as well as private businesses for resolving spectrum use conflicts when they arise.

2. Which non-federal entities operate receive earth stations in the band? (Paragraph 19)

The National Hydrologic Warning Council has informally identified six non-federal entities with earth stations in 2017 in response to earlier attempts to share the1675-1680 MHz spectrum band. The list included state level agencies, river authorities, and a regional; district. There are likely more and we recommend the FCC identify all the existing and planned non-federal earth stations and maintain the list. The method describe in paragraph 19 is a good start.

Please note the majority of non-federal entities, both public and private, depend upon federal government agencies, such as NOAA, USGS, U.S. Army Corps of Engineers, and U.S. Bureau of Reclamation, to make the data available relayed from the ground receive stations operated by those agencies.

3. What other options exist for non-federal users to access the data from NOAA satellites? (Paragraph 20)

No other options exist for non-Federal users to access the raw data aside from the federal and non-federal sources.

4. Is a content delivery system operated over the internet an acceptable alternative? (Paragraph 20)

No. Based previous experience working in emergency activations during many flood and weather events, the internet is very vulnerable to interruptions and slow-downs. There are already issues with transferring readable data over the internet between federal and non-federal agencies, contractors, and the public during events. The transmission of the raw field data from over 17,000 rainfall, water stage, and other sensors by the GOES satellites down to the earth stations is the most reliable link in the hydrological warning communication chain.

5. Would such a system increase the total number of users with reliable access to NOAA satellite data? (Paragraph 20)

> No. The data being transmitted is "raw" and not readable. Sophisticated equipment, software, and knowledge are required to translate into a usable form.

6. Emergency Managers Weather Information Network (Paragraph 9)

> Local and state emergency managers across the U.S. rely on the Emergency Managers Weather Information Network (EMWIN) for official communications during all emergencies, not just weather and flood related. Interruptions in this flow of information would be problematic and a detriment to public safety.

Across the nation, federal and non-federal agencies work closely together in collecting, sharing, and analyzing hydrologic data to reduce loss of life, injuries, property damage, school and business closures, and post-flood recovery costs. Without this time sensitive information, it would not be possible for these people and their public safety organizations to fulfill critical missions related to floods, hurricanes, droughts, dams, levees, tsunamis and other hydrologic hazards

Thank you for the opportunity to provide comments on this important issue on behalf of the hydrologic warning community and the millions of citizens we serve.

Sincerely,

Francisco Sánchez
Deputy Emergency Management Coordinator, Harris County Office of Homeland Security & Emergency Management